105.2 - Serum Materials (frozen, liquid, and lyophilized forms)

These SRMs serve a variety of clinical measurement needs. SRM 909b is a lyophilized human serum for use in determining specified constituents. SRM 927d is a bovine serum albumin in a sterile 7% solution for use in the calibration and standardization of procedures to analyze total serum protein. SRM 956c is a frozen human serum for use in the calibration and standardization of procedures for the determination of specific electrolytes in either diluted or undiluted human serum or plasma. SRM 965b is a frozen human serum for evaluating the accuracy of procedures used to determine glucose in human serum and to validate secondary reference materials. SRM 967a is a frozen human serum for evaluating the accuracy of procedures for the determination of creatinine in human serum. SRM 968d is a lyophilized human serum for validating methods used to determine fat-soluble vitamins, carotenoids, and cholesterol in human serum and plasma. SRM 970 is a frozen human serum for validating methods for determining ascorbic acid in human serum and similar matrices. SRM 971 is a hormone in frozen human serum for evaluating the accuracy of procedures for the determination of the steroid hormones cortisol and progesterone in human serum. SRM 1951a is a frozen human serum for evaluating the accuracy of clinical procedures for the determination of total cholesterol, HDL-cholesterol, LDL-cholesterol and triglycerides (triglyerides and total glyceride species).SRM 972 is a frozen human serum for evaluating vitamin D metabolites. SRM 1951b is a frozen human serum for evaluating the accuracy of clinical procedures for the determination of total cholesterol. SRM 1589a is a freeze-dried human serum for evaluating PCB congeners, chlorinated pesticides and total cholesterol in human serum and similar matrices. SRMs 1957 and 1955 are freeze-dried human serums for evaluating PCB congeners, chlorinated pesticides, and PBDE congeners with non-certified values for PFCs and dioxins/furans. SRM 2921 is a human cardiac troponin complex. SRM 2921 is primarily intended for use in calibrating clinical procedures and devices for the determination of cardiac troponin I (cTnI) in human serum. It can also be used for value-assignment of calibrators and control materials.

For further information see: SP 260-83

Technical Contact: karen.phinney@nist.gov

PLEASE NOTE: The tables are presented to facilitate comparisons among a family of materials to help customers select the best SRM for their needs. For specific values and uncertainties, the certificate is the only official source.

SRM	909b	927d	956c	965b	967a	968d	970	971	972	1951b	1955	1957
Description	Human Serum	Bovine Serum Albumin (7%, solution)	Electrolytes in Frozen Human Serum	Glucose in Frozen Human Serum	Creatinine in Frozen Human Serum	Fat-Soluble Vitamins,Carotenoids and Cholesterol in Human Serum	Ascorbic Acid in Frozen Human Serum	Hormones in Frozen Human Serum	Vitamin D in Human Serum	Lipids in Frozen Human Serum	Homocysteine and Folate in Frozen Human Serum	Organic Contaminants in Non-Fortified Human Serum
Unit Size	((2x3 each conc)+(6 water))	(set (10))	(6 ampoules x 2.0mL each)	(set (8) (2 each conc))	(set(4) (2 each conc))	(set (2) (single conc))	(set (4) (2 each conc))	(5 mL)	(set (4) (1 each level))	(set (4) (2 each conc))	(set (3) (1 each conc))	(5 vials x 10 mL)
Analyte	Calcium Chloride Cholesterol Creatinine Lithium Magnesium Potassium Sodium Total Glycerides Glycerides Urea		CalciumIonized Calcium Chloride Lithium Magnesium Potassium Sodium		Creatinine	Total-Retinol gamma-Tocopherol α-Tocopherol Total β-Carotene Cholesterol	Ascorbic Acid	Male: 1 bottle Cortisol 297.0 nmol/L Progesterone 0.129 nmol/L Female: 1 bottle Cortisol 249.5 nmol/L Progesterone 6.11 nmol/L	25-hydroxivitamin D_2 25-hydroxivitamin D_3 3-epi-25hydroxyvitamin D_3	Total Cholesterol Total Glycerides Triglycerides Only	Homocysteine (µmol/L) 5-Methyltetrahydrofolic Acid Folic Acid (nmol)	PCB Congeners Chlorinated Pesticides PBDE Congeners
909b-1	2.218 mmol/L 89.11 mmol/L 3.787 mmol/L 0.05618 mmol/L 0.6145 mmol/L 0.7634 mmol/L 3.424 mmol/L 120.76 mmol/L 0.949 mmol/L 0.804 mmol/L 5.51 mmol/L											
909b-2	3.532 mmol/L 119.43 mmol/L 6.084 mmol/L 0.4674 mmol/L 2.600 mmol/L 1.918 mmol/L 6.278 mmol/L 141.0 mmol/L 1.529 mmol/L 1.271 mmol/L 30.75 mmol/L											
BSA Concentration		65.41 mg/L										
Level I			2.981 mmol/L 1.78 mmol/L 104.9 mmol/L 1.606 mmol/L 1.247 mmol/L 5.976 mmol/L 118.8 mmol/L	1.836 mmol/L	0.0749 mmol/L	8.41 µmol/L	10.07 µmol/L		(1.46 nmol/L) 59.6 nmol/L (3.46 nmol/L)	4.804 mmol/L 1.370 mmol/L 1.208 mmol/L	3.98 µmol/L 4.26 nmol/L (0.49 nmol/L)	
Level II			2.538 mmol/L 1.48 mmol/L 121.5 mmol/L 1.068 mmol/L 0.857 mmol/L 3.977 mmol/L 137.5 mmol/L	4.194 mmol/L	0.3427 mmol/L	28.05 µmol/L	30.52 µmol/mol		4.14 nmol/L 30.8 nmol/L (1.9 nmol/L)	6.895 mmol/L 2.988 mmol/L 2.700 mmol/L	8.85 µmol/L 9.93 nmol/L (1.05 nmol/L)	
Level III			2.095 mmol/L 1.19 mmol/L 137.4 mmol/L 0.457 mmol/L 0.470 mmol/L 1.982 mmol/L 157.4 mmol/L	6.575 mmol/L					64.1 nmol/L 46.2 nmol/L (2.65 nmol/L)		17.7 µmol/L 37.1 nmol/L (1.07 nmol/L)	
Level IV				16.35 mmol/L					5.81 nmol/L 82.3 nmol/L 94.1 nmol/L			
Single Concentration						1.09 µmol/L 3.34 µmol/L 13.77 µmol/L 0.145 µmol/L 3453 µmol/L						

Values in parenthesis are not certified and given as reference values

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1958	2921
Organic Contaminants in Fortified Human Serum	**Human Cardiac Troponin Complex**
(5 vials x 10 mL)	**(5x115 uL)**
PCB Congeners Chlorinated Pesticides PBDE Congeners PBB 153 Congener (PFCs) (Dioxins/Furans)	cTnI cTnT cTnC
31.2 mg/L (36.9 mg/L) (24.2 mg/L)	

Values in parenthesis are not certified and given as reference values